

and a condition of asphyxia is induced calling for bloodletting. Obliteration also does not occur when the relations of blood-pressure in the great vessels are transposed, as is observed in cases of malformation of the heart or stenosis of the pulmonary artery or aorta.

All these considerations prove that the aortic orifice of the ductus arteriosus closes mechanically, a fact which permits us to understand its reopening in certain determinate conditions.

To demonstrate his theory the author injected the vessels of a number of fetuses with a coagulable liquid. While with the pressure of 100 mm. of mercury the arterial canal could not be injected by way of the aorta, this could be done with great ease, even eight days after birth, by injecting by way of the pulmonary artery. To inject by way of the aorta it was necessary that the fetus should not be completely developed (not later than the beginning of the eighth month with the human fetus), or that the arterial duct should have a certain width from premature respiration, or that the pressure in the aorta be very high.

A CASE OF MELÆNA NEONATORUM.

SCHÜTZE (*Centralblatt f. Gynäkol.*, 1894, No. 9) reports a case in a strong male infant born at term of a mother sixteen years of age. The cord was twisted once around the neck but not tightly enough to cause an asphyxia. The left parietal bone was imperfectly ossified, one part crackling like parchment when pressed. Forty-four hours after birth the child passed blood freely from the bowel, but the hemorrhage was checked by cold gruel enemata containing a few minims of perchloride of iron. Twenty-four hours later the child was very anæmic and cold, though no more blood had been passed, and the abdomen was not swollen. A few hours later blood was again passed at stool and was also vomited. Collapse ended in death an hour later. The umbilicus and its vessels were found healthy, but the mouth was full of dark tea-colored blood, as were also the pharynx, œsophagus, trachea, bronchi and larger tubes, the stomach, the lower part of the ileum, and the large intestine. No ulceration of the intestinal mucous membrane could be detected; the duodenum, jejunum, and upper part of the ileum were empty. The lungs were very emphysematous. There were ecchymoses of the dura mater.

PERIODS OF ISOLATION FOR CONTAGIOUS DISEASES OF CHILDHOOD.

IN the course of a report upon this subject, OLLIVIER (*Gazette Médicale de Strasbourg*, 1894, No. 2, p. 17) makes the following rules:

For scarlatina, variola, varioloid, and diphtheria, the period of isolation, before the child is allowed to return to school, should be forty days, counting from the first day of invasion.

For measles and varicella sixteen days will be sufficient.

For pertussis isolation should be prolonged to three weeks after complete cessation of the characteristic kinks.

For mumps, ten days after the disappearance of the local symptoms.

Nasal, buccal, and pharyngeal irrigations with antiseptic solutions should be employed, and soap bath and rubbing of the entire surface and scalp should be a necessary preparation before returning to school.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE CHARGE OF

JOHN SLADE ELY, M.D.,

PROFESSOR OF PATHOLOGY IN THE WOMAN'S MEDICAL COLLEGE OF THE NEW YORK
INFIRMARY; ASSISTANT IN PATHOLOGY IN THE COLLEGE OF PHYSICIANS
AND SURGEONS; PATHOLOGIST TO BELLEVUE HOSPITAL.

FEVER.

WITH the development of our knowledge of the acute infectious diseases, has arisen the theory that the fever occurring as a part of their clinical picture is the result of the action on the body of certain diffusible products of the bacteria which are their cause. With a view to adding definiteness to this theory, CENTANNI has undertaken an exhaustive study of the fever of the infectious diseases, his investigation being directed to the determination of the following points: 1. What are the agents which cause the fever in these diseases? 2. What is the mechanism by which they act? 3. What therapeutic deductions are possible from the facts developed? The work is not yet completed, but a number of facts bearing upon the first question have been discovered, and form the basis of a preliminary paper upon the Fever-producing Poison of the Bacteria.—*Deutsch. med. Woch.*, 1894, Nos. 7 and 8.

The investigation extended to seventeen pathogenic species, seven non-pathogenic, and to cultures made from air, water, putrefying animal matter, and urine, without any attempt to separate or identify the several species. From cultures of these germs, devoid of peptone, Centanni obtained, by repeated precipitation with alcohol and dialysis, a substance whose chemical properties are quite distinct from those of the bacterial poisons heretofore described (ptomaines, enzymes, toxalbumins), and which, when injected into animals, causes fever, prostration, loss of flesh, and finally death, if continued. This substance, which Centanni believed to be the same in all species of bacteria, is designated by him "pyrotoxina bacterica." It is believed to be in some way derived from the protoplasm of the germs, or to be elaborated by it, and its production is thought to be a quality of all bacteria. He is led to believe that the fever accompanying the acute infectious diseases in man is due to an intoxication of the system by this poison, and explains the irregular course of the fever in the different diseases by the theory that the poison depends for its elaboration upon variable conditions, and that it is these conditions which are different in the various diseases and at different times in the same disease, not the poison.

PYOGENIC MICROCOCCI IN THE BLOOD IN PHTHISIS.

THE large number of bacteria, other than the tubercle bacilli, usually present in the sputum of phthisical patients in whom breaking-down of the lung tissue is associated with more or less fever, and the fact that these bacteria have been shown by cultures to belong in most cases to the group called "pyogenic," have suggested that much of the consolidation of the lung, and, per-